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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|-----------------------|---------------------|------------------|
| 09/747,124 | 12/22/2000 | George Beshara Bendak | AMCC4520 | 1061 |
| 7590 07/22/2005 | | | EXAMINER | |
| Terrance A. Meador INCAPLAW 1050 Rosecrans Street San Diego, CA 92106 | | | CHO, HONG SOL | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2662 | |

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/747,124 | | BENDAK ET AL. | |
| | Examiner | | Art Unit | |
| | Hong Cho | | 2662 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-38 and 42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-38 and 42 is/are allowed.
- 6) ☒ Claim(s) 2-4, 9-11 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 5-8, 12-18 and 22-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The following is in response to the amendments filed on 02/25/2005. Claims 1 and 39-41 were cancelled. Claims 2-38 and 42 remain in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-4, 9-11, and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Khan et al (U.S 4606042), hereinafter referred to as Kahn.

Re claims 2 and 4, Kahn discloses a method for scrambled digital transmission of messages using a superframe for digital signals (*scrambling communications formatted in a digital frame structure by defining a scrambling structure and using the selectable scrambling algorithm*, column 1, lines 55-57), wherein each superframe has two half frames (*forming superframes from a plurality of frames*) containing one byte for additional bits and the digital signal of each superframe is scrambled by adding a periodic bit pattern to the digital signal (*selectively seeding the scrambling structure, generating a*

selectable scrambling algorithm from the selectively seeded scrambling structure with a seed mask for every superframe, column 1, lines 59-63).

Re claims 3 and 9, Kahn discloses resetting a feedback shift register used as a generator for the scrambler sequence at the beginning of each superframe and scrambling the digital signal of each superframe by adding a periodic bit pattern to the digital signal (*selectively seeding the scrambling structure includes initializing the scrambling structure with a seed mask generated in response to a predetermined seed mask selection algorithm, column 2, lines 62-65).*

Re claims 10 and 11, Kahn discloses transmitting and receiving the scrambled communications (column 2, line 67 to column 2, line 2) and unscrambling the scrambled signal by generating in the receiver and adding to the scrambled signal the same scrambler sequence as used in the transmitter (*descrambling communications using a descrambling algorithm responsive to the selectively seeded descrambling structure with a first seed mask, column 3, lines 1-5).*

Re claims 19 and 21, Kahn discloses receiving the scrambled communications (column 2, line 67 to column 2, line 2) and unscrambling the scrambled signal by generating in the receiver and adding to the scrambled signal the same scrambler sequence (*generating a selectable descrambling algorithm responsive to the selective seeding of the descrambling structure*) as used in the transmitter (*descrambling communications using a descrambling algorithm responsive to the selectively seeded descrambling structure with a first seed mask for every superframe, column 3, lines 1-5).*

Re claim 20, Kahn discloses descrambling communications using a same scramble sequence periodically generated in the transmitter (*periodically changing the descrambling structure seed mask*, column 3, line 2-3; line 6).

Allowable Subject Matter

4. Claims 5-8, 12-18 and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 5-8, 12-18, 22-38, and 42 are allowable.

The following is an examiner's statement for reasons for allowance.

6. Claim 5 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest selectively seeding the scrambling structure including selecting a seed mask from a second plurality of seed masks wherein scrambling communications includes scrambling the communications with a second plurality of scrambling algorithms.

Claims 12 and 23 are allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest receiving seed mask information in an auxiliary channel and selecting seed masks in response to the receiving seed mask information and wherein selectively seeding the descrambling structure includes seeding the descrambling structure with the seed masks selected in response to the seed mask information.

Claim 22 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest receiving scrambled communications including receiving scrambled communication superframes, with each superframe including frame synchronization bytes and wherein descrambling communications using a selectable descrambling algorithm includes synchronously descrambling the communications in each superframe in response to the superframe synchronization bytes.

Claim 27 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest programmably scrambling a multidimensional digital frame structure comprising a transmitter including a scrambling algorithm generator having an input to accept a seed mask and an output to supply a scrambling algorithm generator and the seed mask, transmit seed mask generator having a first input to accept seed selection commands and an output connected to the scrambling algorithm generator input to selectively supply seed masks, a scrambler having a first input to accept communications and a second input connected to the scrambling algorithm generator output, the scrambler having an output to supply communications scrambled with the scrambling algorithm responsive to the selected seed mask.

Claim 42 is allowable over the prior art of record since the cited references taken individually or in combination fail to particularly teach or fairly suggest a method for communicating among nodes in a network of communication nodes by sending a descrambling key to selected nodes in the network, receiving descrambling key at the

selected nodes and selecting a seed mask in response to the descrambling key and generating a scrambling algorithm from the first seed mask, generating a descrambling algorithm from the first seed mask, scrambling a communication in the network using the scrambling algorithm, and descrambling the communication at the selected nodes using the descrambling algorithm.

Response to Arguments

7. The Examiner apologizes that after reviewing a case and a prior art the rejection appear to be justified.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent (5835602) to Lang
- US Patent (4771463) to Beeman

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

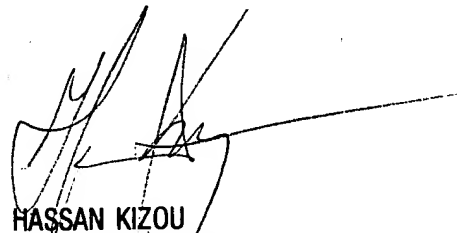
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Art Unit: 2662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho
Patent Examiner
7/21/2005



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600